Behavioral Design Guides

A Financial Health Approach to Credit Card Design

finhealthnetwork.org

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About Our Behavioral Design Guides

This guide is part of a series designed to provide product managers, designers, and strategists with a behavioral framework for building finhealth-minded financial products.

What Is Behavioral Design?

The field of **behavioral science offers powerful insights** into what drives consumers' decisions, including the cognitive biases and mental shortcuts that shape the way we process and act on information. Understanding these mechanisms can help business leaders to design products and services in ways that support consumers' financial health.

Why Behavioral Design?

It supports consumers *and* unlocks business opportunities.

Improving financial health outcomes with behaviorally-informed products and services is a route toward developing longer and better relationships with customers. Consumers who believe that their primary financial institution supports their financial health are:[1]

more satisfied

more likely to refer a new customer

more likely to buy additional products and services

It supports financial institutions' equity strategies.

Research demonstrates that consumers with lower socioeconomic status, financial literacy, and numeracy skills are more influenced by choice architecture, or a decision's structure.[2, 3] Companies can reduce financial health disparities by structuring consumer choices in supportive – rather than harmful – ways.

How To Get Started

Integrating behavioral science into product design can be **effective and low-cost**. Nudges can influence consumers' choices without restricting their options or changing their economic incentives, such as:

- Determining which options to highlight.
- Updating whether a service is opt-in or opt-out by default.
- Reframing messaging.

Behavioral science is one tool that product leaders can use to support financial health, alongside practices such as transparent pricing and developing products and features that cater to demographically and financially diverse populations. Ongoing customer research is also important for helping companies identify how the recommendations in this guide might impact their customers. This guide is intended to highlight promising approaches to integrating behavioral science into product design for product leaders to learn from and adapt to their own context and customers' financial health needs.

[1] Marisa Walster, Nadia van de Walle, & Stephen Arves, "Building Valuable Customer Relationships Through Financial Health," Financial Health Network, August 2020.

[2] Kellen Mrkva, Nathaniel A. Posner, Crystal Reeck, & Eric J. Johnson. "Do Nudges Reduce Disparities? Choice Architecture Compensates for Low Consumer Knowledge," Journal of Marketing, January 2021.

[3] Socioeconomic status is a measure combining educational attainment, occupational status, and income. Numeracy is the ability to apply mathematical concepts like probability and percentages.

Credit Cards and Financial Health

Focusing on consumer financial health outcomes can help providers create products that foster positive relationships *and* directly benefit the bottom line.

As of 2022, less than one-third of U.S. households (31%) are Financially Healthy; that year saw the first overall decline in financial health since 2018.[4] In the third quarter of 2022, total household debt rose to $16.51 trillion in the U.S., with credit card balances increasing to $930 billion – a record 15% increase in credit card balances year over year.[5] In 2021, over half of cardholding households (52%) reported carrying revolving balances on general purpose credit cards, generating an estimated $95 billion in interest and fees.[6]

While revolving balances may generate revenue for credit card providers, a growing number of organizations are designing for financial health as a path to longer-term success. Financially Healthy customers have higher levels of satisfaction and engagement with their financial institution.[7]

Helping customers avoid default can also reduce costs to credit card providers. An estimated 3.5% of general purchase credit card balances end in default, which translates to around $26 billion in charged-off balances per year.[8] Therefore, focusing on financial health outcomes can directly benefit financial institutions' bottom lines, as well as foster positive relationships with their customers.

3.5% of credit card balances end in default, resulting in $26 billion in charge-offs each year.

This guide examines **four key opportunities** for credit card providers to address consumer challenges, along with research-supported behavioral design recommendations for addressing these challenges and improving financial health outcomes.

1	2	3	4
Product Choice	**On-Time Payments**	**Payment Amounts**	**Credit Limit Increases**
When offering multiple credit cards, providers should present product information in a way that helps customers find the right card for them.	Companies should take steps that help customers pay their credit card bills on time.	Credit card payment interfaces should encourage higher payment amounts.	Providers should give consumers more control over their credit limits.

4 Andrew Dunn, Andrew Warren, Necati Celik, & Wanjira Chege, "Financial Health Pulse® 2022 U.S. Trends Report," Financial Health Network, September 2022.

5 "Quarterly Report on Household Debt and Credit 2022:Q3," Federal Reserve Bank of New York, November 2022.

6 Meghan Greene, Elaine Golden, Hannah Gdalman, & Necati Celik, "FinHealth Spend Report 2022," Financial Health Network, April 2022.

7 Aliza Gutman, "Making the Business Case for Financial Health," Center for Financial Services Innovation, March 2018.

8 "The Consumer Credit Card Market," Bureau of Consumer Financial Protection, September 2021; our estimate of $26 billion in charge-offs is derived from reported total balances for general purpose credit cards in 2021 ($745 billion) and the rate of account balances charged off for general purpose credit cards (3.5%).

Behavioral Design for Credit Cards

Opportunities and Guidelines

1 Product Choice

Why It Matters

The card a consumer selects can impact their cost of credit over time as well as financial health. Fees and interest rates can make revolving debt more or less costly, and product features such as rewards programs might either be a welcome benefit to a cardholder or incentivize incremental spending.[9]

What's Challenging About It

As consumers search for and compare credit cards, the decision can be challenging when the information most relevant to their financial health needs is not readily accessible or prominent, despite general disclosure requirements. This can lead to consumers focusing on benefits like rewards programs and giving less thought to the potential long-term costs associated with interest rates and fees.

Consumers face additional barriers as well:

- **People tire from too many options.** In a saturated financial services market, consumers may face more options than they can comfortably compare. This is known as choice overload, which happens when there are too many options – or too complex options – for consumers to choose from.[10]
- **People have limited attention** and tend to focus on the most salient or visible information when they make a decision.[11] This means that consumers might default to the most convenient option, such as a direct mail offer or in-store offer, forgoing the opportunity to weigh the financial health implications of various products' fees, interest rates, and terms.

[9] "Attractive Rewards and Benefits Drive Credit Card Selection, Satisfaction and Spend," J.D. Power, PR Newswire, August 2015.
[10] Barry Schwartz, "The Paradox of Choice: Why More Is Less," Ecco Press, 2004.
[11] George Loewenstein, Cass R. Sunstein, & Russell Golman, "Disclosure: Psychology Changes Everything," Annual Review of Economics, August 2014.

How To Help

Consumers often seek help navigating the complex options available to them: In 2020, 1 in 5 credit card applications were submitted via third-party comparison sites.[12] To help customers evaluate options, credit card providers often have a comparison feature on their own websites that lays out and compares the various products available. The information that a provider highlights in these comparisons can influence a consumer's choice of card, as well as how confident they feel about their choice. To support customers comparing complex options, credit card companies can introduce the following changes.

Simplify Product Options

Simpler product features can lead to improved decision-making.

To help combat choice overload, providers should consider how the quantity and complexity of their product options influence consumers' decisions. The more complex the options, the fewer options that consumers will be able to comfortably compare, and vice versa. Researchers found that study participants were better able to choose a general purpose reloadable prepaid card matching their preferences when they viewed a consolidated set of fewer card features than when they viewed a longer list of features.[13]

Providers offering a wide range of card products to their customers should be especially careful to present information about products in a clear and simple manner. For example, providers may be able to consolidate information about certain features into easily understandable summaries. Providers should also consider adding recommendation engines to their webpages to help guide consumers toward products that best fit their specific needs.

Increase Visibility of Product Trade-Offs

Featuring the trade-offs of different cards can help consumers make informed comparisons without harming acquisition rates.

One way to help consumers select a card is to provide simple, easy-to-compare information about both product advantages and drawbacks. This can have the dual benefit of supporting consumers' financial health and strengthening their relationship with their financial provider.

When presenting card comparisons on their webpages, card providers should help consumers interpret their options **by framing** the features of each card **in comparison to other cards**. For example, if a card has an attractive rewards program but its annual fee is higher than other cards, presenting both of these pieces of information allows the consumer to make an informed choice based on their prioritization of rewards or lower annual fees.

Companies can also help customers determine if different products meet their needs or preferences by adding suggestions about whom the card is best suited for. Commonwealth Bank of Australia, for example, highlights that some of their higher-interest-rate cards might not be suited for customers who tend to make only the minimum payments (see Making Credit Card Trade-Offs Visible).

[12] "The Consumer Credit Card Market," Bureau of Consumer Financial Protection, September 2021.

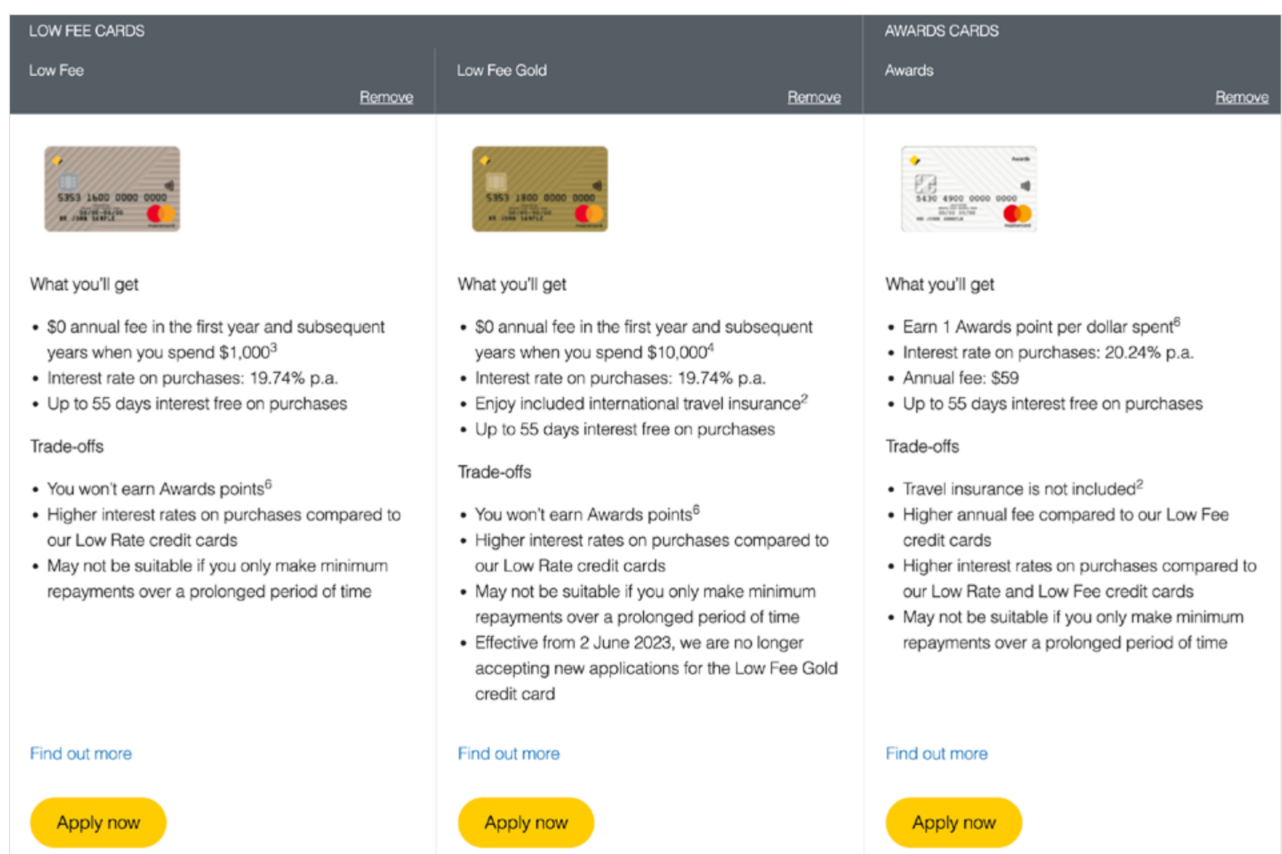
[13] Jeffrey Carpenter, Emiliano Huet-Vaughn, Peter Hans Matthews, Andrea Robbett, Dustin Beckett, & Julian Jamison, "Choice Architecture to Improve Financial Decision Making," The Review of Economics and Statistics, March 2021.

RESEARCH SPOTLIGHT

Making Credit Card Trade-Offs Visible

In partnership with Commonwealth Bank of Australia, researchers found that displaying information about the trade-offs of their personal credit card options (such as a higher annual fee or exclusion from rewards programs) in addition to the benefits led to a better customer relationship over time.[14] They found that highlighting the pros and cons of their card account options:

- **Did not harm overall customer acquisition rates**, compared with consumers who weren't provided the additional information on trade-offs.
- **Led to customers choosing different types of cards,** suggesting that customers were better able to choose a card that suited their specific needs.
- **Led to higher monthly spending** and lower cancellation rates.
- **Decreased the probability of customers making late payments.**



Source: Commonwealth Bank of Australia

14 Ryan W. Buell & MoonSoo Choi, "Improving Customer Compatibility with Tradeoff Transparency," Harvard Business School, July 2019.

2 On-Time Payments

Why It Matters

Making on-time credit card payments helps consumers avoid late fees and interest charges, and can also help them maintain or build a prime credit score. Nearly 1 in 10 U.S. households reported making a late credit card payment in the 12 months prior to November 2021.[15]

What's Challenging About It

Borrowers who have not set up autopay must take action to make their payment, such as spending a few minutes on a mobile app or webpage, or dropping a check in the mail. However, many consumers may not follow through with these steps. There are a number of factors that might lead to a consumer missing a payment:

- **Not following through on intentions:** Despite good intentions and an understanding of the importance of making on-time payments, consumers may fail to take action in time. The intention-action gap describes this failure to follow through on a goal or intention.[16] There are many potential explanations for why someone might fail to take action, and context and personal situation play an important role.
- **Forgotten due dates:** As described in the section on product choice above, consumers' limited attention means that without a just-in-time reminder or notification, people may forget about or be unaware of their payment due dates.

One way to overcome these barriers is by opting into recurring automatic payments. Autopay, however, also comes with its own set of challenges (see Autopay and Financial Health).

[15] "2021 Consumer Financial Literacy and Preparedness Survey," National Foundation for Credit Counseling, Wells Fargo, December 2021.

[16] Peter M. Gollwitzer & Paschal Sheeran, "Implementation Intentions and Goal Achievement: A Meta-analysis of Effects and Processes," Advances in Experimental Social Psychology, May 2006.

AUTOPAY AND FINANCIAL HEALTH

Around 20% of active credit card accounts were enrolled in autopay in 2020.[17] The financial health implications of encouraging autopay enrollment remain ambiguous based on the latest research. In fact, increases in autopay enrollment at a U.S. credit card fintech led to decreases in both short-run and long-run delinquencies in one instance, and ambiguous effects in another instance.[18] Among accounts that didn't charge off, **autopay enrollment was associated with lower average payment amounts** and a higher share of account holders making the minimum payment amount, leading to higher revolving balances and interest costs.[19]

Other research has sought to mitigate these negative effects of autopay on payment size, with little success. A U.K.-based study tested the effects of nudges that encouraged customers to set their autopay amount to a **fixed amount greater than the minimum**. While the nudges increased enrollment in fixed amount autopay, over the long term there was no impact on total debt balances, as consumers counterbalanced their higher automatic payment amounts with lower manual payments.[20] Similarly, another U.K.-based study found that, although removing the minimum payment from the set of autopay options increased the share of cardholders choosing higher automatic payment amounts, it also led to more consumers opting out of autopay altogether.[21]

While autopay may solve for the problems of missed payments due to forgetfulness or inattention, it is less clear how autopay impacts long-term delinquency rates, financial health, and overall indebtedness. Therefore, companies should exercise caution in encouraging autopay enrollment. **We urge providers to develop and test methods of offering autopay that don't lead to a cycle of low payments**, such as a system that escalates automatic payment amounts over time. When testing for impact, providers should consider how autopay interacts with customers' manual payments as well.

[17] "The Consumer Credit Card Market," Bureau of Consumer Financial Protection, September 2021.

[18] Jialan Wang, "To Pay or Autopay? Fintech Innovation and Credit Card Payments," University of Illinois at Urbana-Champaign, National Bureau of Economic Research, January 2022.

[19] Ibid.

[20] Paul Adams, Benedict Guttman-Kenney, Lucy Hayes, Stefan Hunt, David Laibson, & Neil Stewart, "Do Nudges Reduce Borrowing and Consumer Confusion in the Credit Card Market?," Economica, June 2022.

[21] Paul Adams, Benedict Guttman-Kenney, Lucy Hayes, Stefan Hunt, David Laibson, & Neil Stewart, "The semblance of success in nudging consumers to pay down credit card debt," Financial Conduct Authority, July 2018.

How To Help

Reminder messages have long been used to combat inattention and spark action in fields ranging from healthcare to microfinance.[22, 23] Credit card providers often send emails, text messages, or alerts that remind consumers of upcoming payment due dates. Providers can further support their customers in making on-time payments by including content that makes reminders more impactful.

To support customers in making on-time payments, companies can take steps to enhance their alerts and reminders.

Use Planning Prompts for Payments

Planning prompts can bridge the intention-action gap.

Going a step further from a simple reminder message, planning prompts may increase the likelihood that consumers follow through on their intentions by asking them to create a detailed action plan of when, where, and how they'll complete a broader activity or goal. By laying out the specific steps of a process, planning prompts call people's attention to their goals and get them to think through the action steps, which in turn can help people remember to pay.

RESEARCH SPOTLIGHT

Decreasing Credit Card Delinquency With Interactive Voice Response Planning Prompts

A study with a North American credit card company that serves a large share of subprime customers found that planning prompts can bridge the intention-action gap, increasing the likelihood that customers with delinquent accounts make a payment.

Interactive voice response (IVR) calls alert customers of their missed monthly payment and total amount due; they then ask if the customer has paid, plans to pay within three days, or would like to speak to an agent. For customers who responded that they intend to pay within three days, the study added an additional interactive menu that further prompted delinquent account holders to select a more concrete time frame within which they would make their payment (i.e., within the next 24, 36, or 48 hours).

Introducing these interactive planning prompts **increased the likelihood that customers paid their account**. Customers who received the planning prompt were 2.26 percentage points more likely to pay their account than those who just received a reminder message about their total amount due (87.02% vs. 84.76%).[24]

[22] Jay Thakkar, Rahul Kurup, Tracey-Lea Laba, Karla Santo, Aravinda Thiagalingam, Anthony Rodgers, Mark Woodward, Julie Redfern, & Clara K. Chow, "Mobile Telephone Text Messaging for Medication Adherence in Chronic Disease: A Meta-analysis," JAMA Internal Medicine, March 2016.

[23] Ximena Cadena & Antoinette Schoar, "Remembering to Pay? Reminders vs. Financial Incentives for Loan Payments," National Bureau of Economic Research, May 2011.

[24] Nina Mazar, Daniel Mochon, & Dan Ariely, "If You Are Going to Pay Within the Next 24 Hours, Press 1: Automatic Planning Prompt Reduces Credit Card Delinquency," Journal of Consumer Psychology, January 2018.

Provide Borrowers With Easy Access to Their Credit Scores

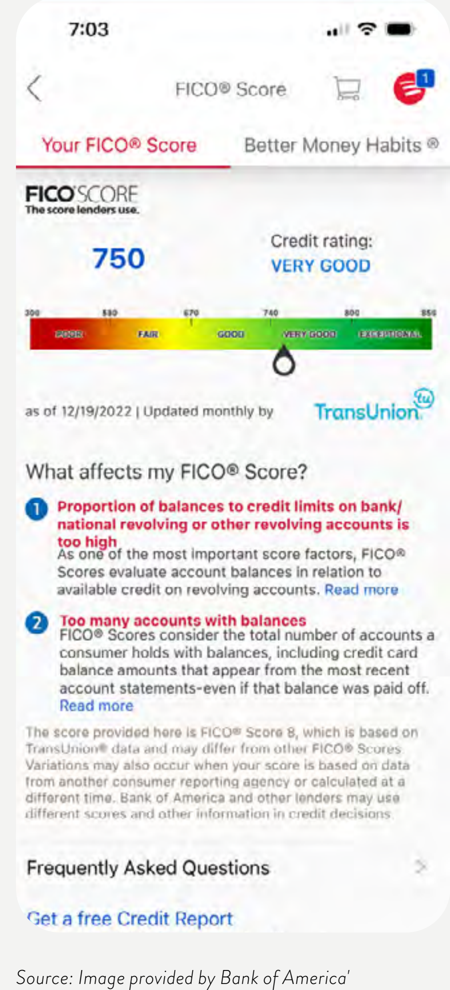
Credit score access can improve repayment behavior.

One way to combat people's overoptimism with regards to making on-time payments is to **make the impacts of on-time payments more salient**. A field experiment sent student loan borrowers quarterly email communications that included a link allowing them to view their FICO® Score at no cost. Over the course of one year, student loan borrowers who received these emails were 4% less likely to have late payments and had FICO Scores two-thirds of a point higher than those who did not receive the communications.[25] These changes were even greater for borrowers who opened the emails and chose to view their scores.[26]

Bringing attention to borrowers' credit scores on a regular basis can prevent them from overestimating their scores and draws attention to the connection between on-time repayment behavior and credit standing. This works with customers' limited attention by highlighting relevant information in an easy-to-access format.[27] Self's Credit Builder Account displays the customer's credit score on the mobile app's homepage, bringing salience to the financial health outcome of timely payments. Several traditional credit issuers also share credit scores with customers, including American Express (MyCredit Guide), Bank of America (see Figure 1), Capital One (CreditWise), and Wells Fargo (Credit Close-Up℠).

Figure 1. Bank of America's FICO® Score Program.

Bank of America's mobile app provides consumers access to tools that help them understand their credit. Credit card customers can view a monthly report without negatively impacting their credit score, see factors that are impacting their score, track recent scores month to month, and learn more about credit strategies to keep their credit healthy.



Source: Image provided by Bank of America'

[25] Tatiana Homonoff, Rourke O'Brien, & Abigail B. Sussman, "Does Knowing Your FICO Score Change Financial Behavior? Evidence from a Field Experiment with Student Loan Borrowers," Review of Economics and Statistics, May 2021.

[26] Ibid.

[27] Note: Making this information available to customers may yield different results for different customer segments and should be tested accordingly. Researchers found that for consumers with declining credit scores, email prompts to view their scores backfired, and caused further declines in their credit scores. See Jessica Fong & Megan Hunter, "Can Facing the Truth Improve Outcomes? Effects of Information in Consumer Finance," January 2021.

3 Payment Amounts

Why It Matters

The Financial Health Pulse® showed that 1 in 4 consumers (26%) had an unmanageable amount of debt in 2022.[28] The amount that a consumer chooses to pay toward their credit card balance can make a big difference in their total costs. Approximately 1 in 3 accounts (29%) regularly pay only the required minimum towards their credit card balances.[29] Consumers can reduce the amount of interest that they pay over time by increasing the size of their payments. Larger payments can also boost a consumer's credit score by lowering their credit utilization rate.

What's Challenging About It

Choosing how much to pay toward a credit card can be challenging, particularly when the typical options presented to consumers range from the low amount of a minimum payment to the high amount of a statement balance. Making payment choices across multiple cards or other debts increases the complexity of each individual decision as well (see Managing Multiple Debts). Other barriers that consumers face when working to reduce debt include:

- **Anchoring on the minimum payment amount:** A credit card's minimum required payment is typically offered as an option in online repayment interfaces, as well as on statements. This acts as an anchor that pulls down the amounts that people choose to pay.[30] Researchers estimate that at least 22% of those who make minimum payments do so because of anchoring.[31]
- **Daunting goals:** The further away that a consumer is from paying off a debt, the less motivating it is to chip away at the balance.[32] The goal-gradient effect describes how people put greater effort toward achieving a goal as they come closer to achieving it. For consumers with high credit card balances, it can be hard to achieve a sense of progress against large balances.
- **Underestimating the costs of carrying higher balances:** The exponential growth bias reflects how consumers systematically underestimate how much interest costs on debt add up over time.[33]

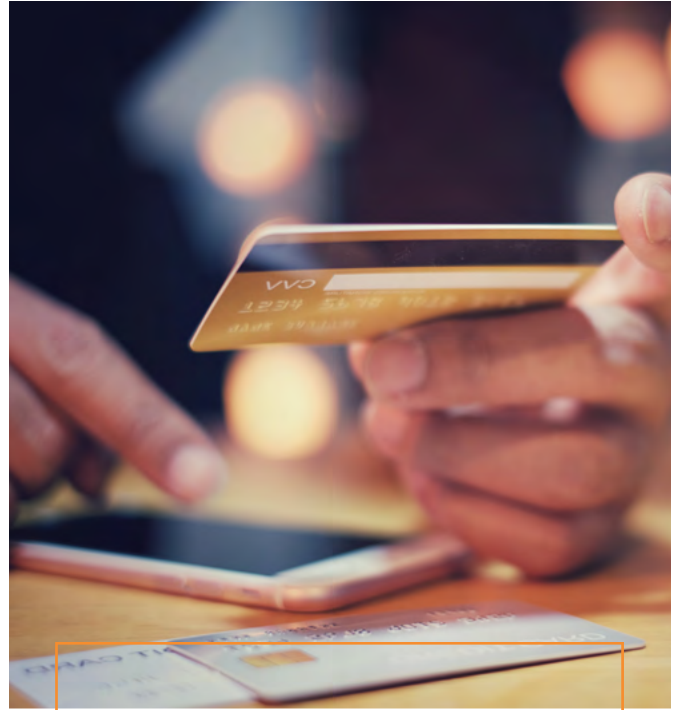
[28] Andrew Dunn, Andrew Warren, Necati Celik, & Wanjira Chege, "Financial Health Pulse® 2022 U.S. Trends Report," Financial Health Network, September 2022.
[29] Benjamin J. Keys & Jialan Wang, "Minimum payments and debt paydown in consumer credit cards," Journal of Financial Economics, March 2019.
[30] Neil Stewart, "The Cost of Anchoring on Credit-Card Minimum Repayments," Psychological Science, January 2009.
[31] Benjamin J. Keys & Jialan Wang, "Minimum payments and debt paydown in consumer credit cards," Journal of Financial Economics, March 2019.
[32] Keri L. Kettle, Remi Trudel, Simon J. Blanchard, & Gerald Häubl, "Repayment Concentration and Consumer Motivation to Get Out of Debt," Journal of Consumer Research, August 2016.
[33] Victor Stango & Jonathan Zinman, "Exponential Growth Bias and Household Finance," The Journal of Finance, November 2009.

MANAGING MULTIPLE DEBTS

Of the 181 million adults in the U.S. with a credit card, around 93 million consumers hold more than one card.[34] For individuals who are unable to fully pay off their balances each month, making payment decisions across multiple credit cards can be challenging.

Focusing payments on the card with the highest interest rate will save consumers the most in interest costs. However, many consumers use a balance-matching heuristic to evenly distribute their repayments in proportion to the outstanding balance on each credit card.[35] This type of repayment "matching behavior" is driven by the salient placement of balances on credit card statements or payment interfaces.

Other consumers may prioritize reducing the total number of debts they have by paying the debt with the smallest balance first (popularly known as the "debt snowball" method) due to debt account aversion.[36] A study of clients in a debt settlement program found that those who paid off a greater fraction of debt accounts (by closing small-dollar debt accounts) were more likely to become debt-free.[37] More research is needed to understand whether the debt snowball method motivates consumers to pay down debt more quickly and how this strategy might compare with others that reorient consumers toward repaying their highest interest rate cards.



Of the 181 million adults in the U.S. with a credit card, around 93 million consumers hold more than one card.

[34] "The Consumer Credit Card Market," Bureau of Consumer Financial Protection, September 2021.

[35] John Gathergood, Neale Mahoney, Neil Stewart, & Jörg Weber, "How Do Americans Repay Their Debt? The Balance-Matching Heuristic," American Economic Review, February 2019.

[36] Moty Amar, Dan Ariely, Shahar Ayal, Cynthia E. Cryder, & Scott I. Rick, "Winning the Battle but Losing the War: The Psychology of Debt Management," Journal of Marketing Research, March 2019.

[37] David Gal & Blakely B. McShane, "Can Small Victories Help Win the War? Evidence from Consumer Debt Management," Journal of Marketing Research, August 2012.

How To Help

The options that a credit card company presents in its online payment interface can influence the size of payment that consumers choose to make. Online and mobile payments are the most common way that consumers make credit card payments; in 2020, customers made online or mobile payments on 60% of U.S. credit card accounts.[38]

Online and mobile credit card payments are typically structured for the customer to choose from a set of options, such as the statement balance, minimum balance, or a custom amount of their choosing. This structure, which behavioral scientists call active choice, increases the salience of the options listed and the likelihood of consumers selecting one of those options for their payment.[39]

To support customers in making higher payments toward their balances, credit card companies can revise their online and mobile payment interfaces in three ways.

Emphasize Larger Payment Amounts

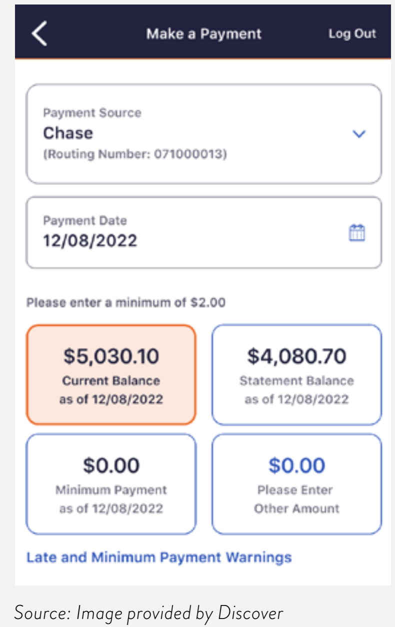
Current balances provide a high anchor that can increase repayment amounts.

To counterbalance the anchoring effect of the minimum payment, credit card companies can emphasize larger payment options within the payment interface. Because the current balance tends to be higher than the statement balance and minimum payment, emphasizing this option is likely to pull up the amount that consumers choose to pay. For example, companies can **highlight the current balance as a preselected option** when the payment options are displayed as radio buttons, tiles, or in a drop-down list.

Many companies include current balance as a payment option for their credit cards, including Capital One, Discover, and Wells Fargo. In an online study, researchers found that people chose payment amounts that were 76% higher when the current balance was simply included among the payment options.[40] Bringing greater attention to this higher number may encourage consumers to increase their payments further.

Figure 2. Current balance included in payment options for Discover.

Discover's mobile app provides an active choice between four options on the credit card payment page: the current balance, the statement balance, the minimum payment, or a custom amount. Emphasizing the larger current balance by preselecting that tile could act as an anchor to pull up the amounts that consumers choose to pay.



Source: Image provided by Discover

[38] "The Consumer Credit Card Market," Bureau of Consumer Financial Protection, September 2021.

[39] Linda Court Salisbury & Min Zhao, "Active Choice Format and Minimum Payment Warnings in Credit Card Repayment Decisions," Journal of Public Policy & Marketing, December 2019.

[40] Ibid.

De-emphasizing the minimum payment amount can also help to increase borrowers' payments. Credit card companies can make information about the minimum required payment available in a customer's online account (such as an account dashboard) without listing the minimum payment in the set of options in the payment screen.

To ensure consumers don't inadvertently make payments below the minimum, card providers can trigger a follow-up prompt that shares the minimum payment with consumers who enter a low payment and asks them if they wish to increase their payment accordingly. This approach highlights minimum payment information to the people for whom it is relevant, while avoiding anchoring others on a low dollar amount.

Recommend a Payment Amount for a Chosen Payoff Time Frame

Do the math for consumers to identify a payment amount that would pay off a balance in the time frame a consumer chooses.

Providing a payment amount beyond standard options like the statement balance provides a goal that customers may perceive as more feasible, and therefore more motivating, than the daunting goal of paying off the full balance.

Credit card companies can help consumers choose a time frame in which to pay off their current balance. The company can then calculate the monthly payment amount that would achieve that goal. Although this strategy will not fully repay a consumer's accruing balance as they continue to spend, this approach helps to increase payment size (see Providing a Pay-Down Payment Amount).

RESEARCH SPOTLIGHT

Highlighting the Minimum Payment as a Follow-Up Prompt

Researchers conducted an online study of people who had recently opened a credit card in the U.K. to examine the impact of removing the minimum payment from the set of highlighted payment options. They found that when the minimum payment was removed as an option, people chose to pay 44% more.[41] Removing the minimum payment also increased the percentage of people who chose to pay their balance in full by almost 50%.

To address cases where consumers choose payment amounts below the absent minimum, a U.K.-based online study of hypothetical credit card payments implemented a follow-up prompt and a chance to revise their payment amount. In this study, 13 out of 14 people who initially selected a payment below the minimum chose to increase their payment to the minimum or higher after the prompt.[42]

When the minimum payment was removed as an option, people chose to pay 44% more.

[41] Benedict Guttman-Kenney, Jesse Leary, & Neil Stewart, "Weighing anchor on credit card debt," Financial Conduct Authority, July 2018.

[42] Paul Adams, Benedict Guttman-Kenney, Lucy Hayes, Stefan Hunt, & Neil Stewart, "Increasing credit card payments using choice architecture: The case of anchors and prompts," Financial Conduct Authority, July 2018.

THE DOWNSIDES OF FEATURING A 3-YEAR PAYOFF AMOUNT

Credit card statements feature a required "minimum payment warning" that shares the payment amount a consumer would need to make to pay off their balance in three years (a "three-year payoff amount"). Researchers have found that duplicating this information within a payment interface (in addition to periodic statements, as required) can backfire. Consumers who may have made a larger payment perceive the three-year payoff amount as a recommendation, and may lower their payment amount as a result.[43] Engaging in a more personalized process to identify an ideal time frame for paying off debt may be a better approach for supporting consumers' financial health.

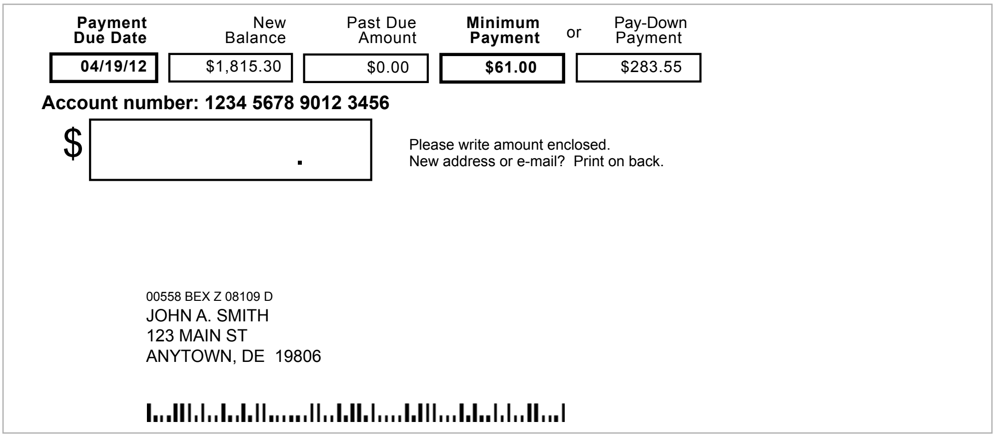
RESEARCH SPOTLIGHT

Providing a Pay-Down Payment Amount

A large bank offered the option to its credit card customers to identify a period of time in which they would like to pay off their balance and calculated a payment amount for them that would do so. Although this feature has been discontinued, this pay-down amount was displayed on consumers' monthly statements as a payment option alongside other account information.

Researchers' analysis of this feature found that among consumers who chose to set it up, the percentage of payments made at the minimum dropped from 23% to 14%. Furthermore, the proportion of payments made above the calculated amount increased from 30% to 45%.[44]

Sample Statement



Payment Due Date	New Balance	Past Due Amount	Minimum Payment	or	Pay-Down Payment
04/19/12	$1,815.30	$0.00	$61.00		$283.55

Account number: 1234 5678 9012 3456

$ [.]

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123 MAIN ST
ANYTOWN, DE 19806

[43] Hal E. Hershfield & Neal J. Roese, "Dual payoff scenario warnings on credit card statements elicit suboptimal payoff decisions," Journal of Consumer Psychology, July 2014.
[44] Daniel Bartels & Abigail Sussman, "Anchors or Targets? An Examination of Credit Card Statements," Advances in Consumer Research, 2017.

Enable Payoff of Spending Categories

Paying off a subset of transactions can motivate consumers to pay more.

Credit card providers can offer consumers the chance to pay off specific categories of transactions to counteract the demotivating effects of chipping away at a daunting balance. It breaks apart that balance into sub-goals that are individually more achievable, such as fully paying off expense categories like utilities, entertainment, or dining out. Being able to fully pay off a purchase or a category of purchases fosters a motivating sense of progress.

Commonwealth Bank of Australia provided its customers with a "Pay by Category" option in its repayment interface. This feature appeared to positively impact customers' payment amounts in a test (see Commonwealth Bank of Australia's "Pay by Category" Feature below), indicating that more exploration of consumer demand for these features is needed.

RESEARCH SPOTLIGHT

Commonwealth Bank of Australia's "Pay by Category" Feature

In an online study, researchers found that consumers who could make a payment toward specific transactions felt a greater sense of progress than consumers who paid an equivalent amount toward their full balance.[45] Commonwealth Bank of Australia implemented a similar repayment feature that enabled credit card customers to pay their bill by spending category (e.g., groceries). Customers could view their balance in each category and select whether to pay off the entire amount or a portion of the category. Customers who opted to pay by category paid 12% more towards their debt balances than similar customers who were only offered offered the standard repayment experience.[46]

[45] Grant E. Donnelly, Cait Lamberton, Stephen Bush, Zoe Chance, & Michael I. Norton, "'Repayment-by-Purchase' Helps Consumers to Reduce Credit Card Debt," Harvard Business School, November 2020.

[46] Ibid.

CONVERTING CREDIT CARD PURCHASES INTO INSTALLMENT PLANS

Several credit card issuers are beginning to offer installment plans for larger purchases. These plans allow customers to pay for purchases over time with fixed monthly payments. Depending on the provider, the installment payment may include an interest charge or monthly fee in addition to amortizing the principal balance. These types of plans are offered by providers including American Express (Plan It®), Citi (Flex Pay), and U.S. Bank (ExtendPay® Plan).

For example, customers can enroll in U.S. Bank's ExtendPay Plan for purchases of $100 or more. The ExtendPay Plan will include equal monthly payments over three to 24 months, including a fixed monthly fee.

U.S. Bank's ExtendPay Plan introduces a fixed payment amount that is lower than the customer's total credit card balance, which could make the repayment feel more feasible. Additionally, paying off specific purchases could be more motivating than chipping away at the total balance.

Although this feature is becoming more popular among issuers, more research is needed to fully understand the impact on payment behavior and balances, as well as financial health. One drawback to consider: Offering these types of plans extends the payment of an item over time, potentially adding to the cost of borrowing for the item.

4 Credit Limit Increases

Why It Matters

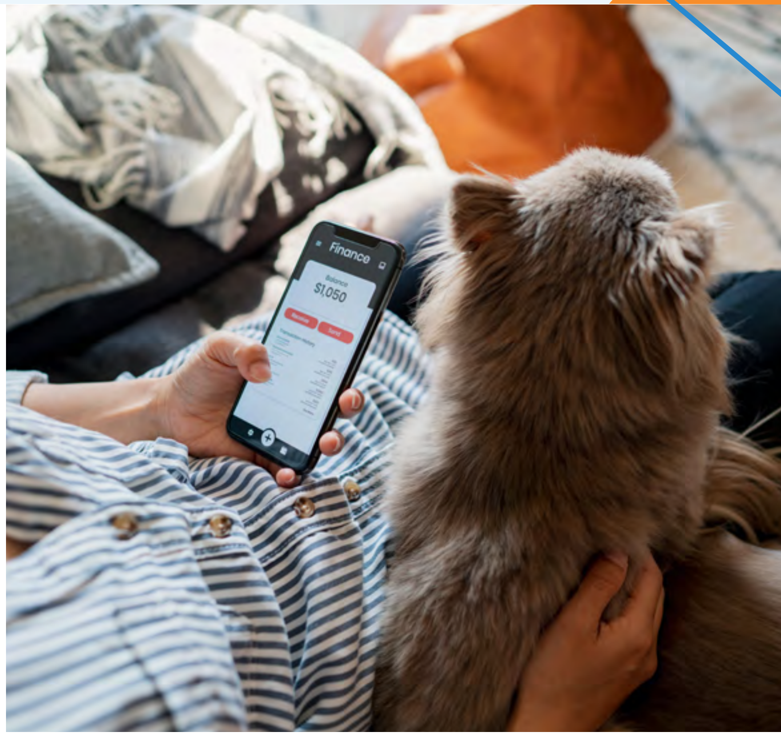
In 2022, 4% to 5% of large bank consumer credit card accounts had credit line increases each quarter, which card issuers can apply automatically without cardholder consent.[47] Low credit limits could lead to higher utilization rates, which can negatively impact credit scores. Larger credit limits, on the other hand, could lead to higher spending and larger revolving balances over time.

What's Challenging About It

It can be difficult for cardholders to predict the amount they will borrow or their ability to pay off their balance in the future across payment cycles. However, if a consumer borrows too much on their credit card without understanding the future costs of paying it down, this could lead to significant financial hardship. Other barriers include:

- **Underestimating how interest adds up over time:** Exponential growth bias explains how people tend to underestimate how interest on debt compounds over time.[48] This means that credit cardholders may not anticipate what it will cost them to revolve a balance month to month.

A panel study of 24,000 credit card accounts found that a $1,000 credit line increase generated a $130 increase in debt on average.



- **Credit limits acting as a spending target:** High credit limits can have an anchoring effect on cardholders and draw up the amount they choose to borrow.[49] Research suggests that credit line increases can act as a spending target for consumers, therefore driving up total debt. A panel study of 24,000 credit card accounts found that a $1,000 credit line increase generated a $130 increase in debt on average.[50] A more recent analysis of credit bureau data found that among cardholders who typically carry balances from month to month, a 10% increase in credit led to a 9.9% increase in debt over the long term.[51] In both cases, debt increased even among accounts with low utilization rates, signaling that the increased spending was not just a symptom of credit need.

[47] "Large Bank Consumer Credit Card Balances: Accounts with Credit Line Increase [RCCCBPCTCLINC]," Federal Reserve Bank of Philadelphia, Federal Reserve Bank of St. Louis, January 2023.

[48] Victor Stango & Jonathan Zinman, "Exponential Growth Bias and Household Finance," The Journal of Finance, November 2009.

[49] Peter J. Scott & Colin Lizieri, "Consumer house price judgements: new evidence of anchoring and arbitrary coherence," Journal of Property Research, January 2012.

[50] David B. Gross & Nicholas S. Souleles, "Do Liquidity Constraints and Interest Rates Matter for Consumer Behavior? Evidence from Credit Card Data," Quarterly Journal of Economics, February 2002.

[51] Scott Fulford & Scott Schuh, "Consumer Revolving Credit and Debt over the Life Cycle and Business Cycle," Federal Reserve Bank of Boston, October 2015.

How To Help

A credit line increase can grant customers more flexibility and borrowing power (and, spending held constant, could lead to a lower utilization rate and better credit health). However, automatic increases to credit limits can also act as high anchors and drive up the total amount borrowed.[52] To give customers more control over their credit limit, providers can allow consumers to opt in to credit line increases.

Allow Consumers To Opt In to Credit Line Increases

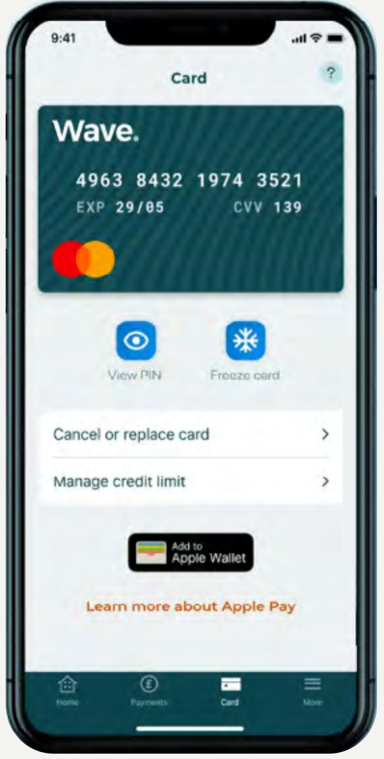
Adding friction to credit line increases can prevent increased debt.

To help consumers avoid taking on more debt, providers should consider **adding friction to credit line increases** by prompting consumers to opt in to credit line increases on their accounts. Instead of notifying a customer after a credit line increase has already been implemented (which would require action from the customer to request that their limit be decreased), providers should consider triggering a notification that informs them of their new credit line eligibility and gives them the option to opt in for an increase. In this instance, a lack of action from the customer would translate to no changes to their credit limit.

At origination, providers could also present an option for customers to opt out of future automatic credit line increases. This option could appeal to customers who are particularly tuned into their spending habits and may embrace the option to keep their credit limit consistent over time.

Figure 3. Wave allows customers to manage their credit limit.

Wave, a credit card offered in the U.K., provides consumers with an opportunity to make an active choice about increases to their credit limits. Wave adds friction to credit line increases by giving consumers the choice to opt in to or out of credit limit increases. Customers are also able to decrease their credit limit at any time through the app.[53]



Source: Wave

[52] There are a range of strategies that aim to help customers manage their spending and avoid becoming overly indebted. This section, however, focuses specifically on how the size of the credit line can influence how much a customer borrows.

[53] Douglas Blakey, "Chetwood Financial launches first credit card, Wave," Electronic Payments International, February 2022.

Applying Behavioral Design to Installment Loans

While this guide focuses on the research related to designing credit cards for financial health, some insights can be applied to support consumers with other credit products as well, such as auto loans, personal loans, or student loans.

The recommendations below are also relevant for installment loans:

- **Increase visibility of product trade-offs:** Companies offering any type of credit may benefit from helping consumers weigh the trade-offs between the products they offer. For example, installment loan providers can help consumers assess different term lengths and their implications for monthly payment amounts and total costs.
- **Use planning prompts to bridge the intention-action gap:** Encouraging on-time payments with planning prompts applies to installment products where consumers aren't enrolled in autopay.
- **Provide borrowers easy access to their credit scores:** Research shows that access to credit scores improves student loan borrowers' repayment behavior and can be used to encourage timely payments for other types of loans as well.

Unlike credit cards, the consumer benefits of autopay are more straightforward for installment loans. Encouraging autopay for installment loans can ensure on-time payments and protect borrowers' credit scores without a risk of setting a payment amount that leads to a ballooning debt balance.

Consumers face certain decisions with closed-end loans that are different from key decisions related to credit cards, such as how much to borrow for a purchase like a house or car, or whether to overpay on an installment loan to pay it off early. Currently, there is less evidence about how companies can support financially healthy decision-making with these aspects of installment loans.

Building on Best Practices: What's Next?

With U.S. household debt on the rise, supporting consumer financial health through thoughtfully designed credit products is all the more important.

The recommendations outlined above should serve as a jumping-off point for product managers to incorporate behavioral research and design into their financial health strategy.

Of course, behavioral research on credit cards is still evolving and there is much more to learn. In some cases, strategies that can boost financial health see low take-up rates from consumers. There is more work for providers to do to market – and engage consumers with – innovative financial health features. The Financial Health Network will continue to monitor innovative financial health solutions and behavioral research to share learnings.

Other questions for future research include:

- What is the best way to design autopay for credit cards to support financial health?
- What are the financial health implications of installment payment plans for specific purchases on a credit card?
- Are there repayment strategies across multiple debts that balance sustaining consumer motivation with minimizing interest charges?
- Can messaging about utilization rates and credit health temper the anchoring effect of credit limit increases?

We encourage product managers to implement the recommendations in this guide and share learnings about their financial health impacts across contexts and customer segments. Additionally, we look to industry leaders to develop and test new solutions leveraging behavioral science and add to the growing body of knowledge about finhealth-minded product design.

Glossary of Behavioral Science Terms

Active choice: A structure of a decision that requires people to choose between a set of options. An active choice prompts people to think more carefully about a decision.

Anchoring: Exposure to a number (anchor) can influence a decision, even if the number is unrelated to the decision itself. People's choices are pulled towards the anchor, whether up or down, from what they would have chosen without seeing the anchor.

Choice architecture: The structure of a choice, including how choices are ordered or prioritized. Intentional or not, choice architecture influences the decision-maker.

Choice overload: A state where someone's decision-making abilities are compromised because their options are too complex or too numerous. Choice overload can result in disengaging from the decision.

Debt account aversion: The preference to minimize the total number of debts that someone holds. This can lead consumers with multiple debt accounts to prioritize paying off smaller-balance debts first rather than minimizing interest charges.

Exponential growth bias: The tendency to underestimate exponential growth, such as the impact of compound interest over time. This can contribute to people saving less and borrowing more.

Goal-gradient effect: The relationship between the distance remaining to achieve a goal and motivation to achieve the goal, in which motivation increases as someone gets closer to reaching their goal.

Intention-action gap: Failure to follow through on a plan or goal, despite best intentions.

Limited attention: Describes the constraints on how much information people can attend to at a given time. These constraints can lead people to base their decisions on a subset of information that is most visible or available.

Nudge: A component of choice architecture that influences people towards a certain action or decision without restricting their choices. Despite being simple and inexpensive to implement, nudges can have substantial effects.

Gain More Behavioral Insights. Shape Better FinHealth Products.

The Financial Health Network illuminates barriers created by behavioral biases and explores real-world solutions for improving financial health for all.

For more content and resources, visit finhealthnetwork.org/behavioral-insights.

The Financial Health Network is the leading authority on financial health. We are a trusted resource for business leaders, policymakers, and innovators united in a mission to improve the financial health of their customers, employees, and communities. Through research, advisory services, measurement tools, and opportunities for cross-sector collaboration, we advance awareness, understanding, and proven best practices in support of improved financial health for all.

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